

OPTICAL FIBER SPLICING PROTECTION APPARATUS FOR USE IN OPTICAL FIBER HYDROPHONE ARRAY

Abstract

An optical fiber splice protection apparatus that allows optical fiber to be spliced and placed in position on a mandrel in cases of assembling a module or repairing optical fiber that has been broken. The present invention comprises a splice protector affixed to a mandrel and a rotation sleeve for winding excess fiber onto the mandrel. The rotation sleeve is located between the splice protector and an adjacent mandrel. The rotation sleeve facilitates winding excess fiber onto the mandrel, and has a longitudinal axis aligned with the longitudinal axis of the hydrophone assembly with a groove to receive the fiber and maintain the fiber's minimum bend radius. The splice protector and the rotation sleeve are substantially semi-circular in cross-section. A method is also provided for protecting spliced optical fibers using a splice protector and rotation sleeve.